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Public Administration Conference (PAC) Conference 2011

Evaluation practices and processes within the UK Fire and Rescue Services: Case of community fire safety initiatives.

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Introduction:

Knowledge Transfer Partnership (KTP) aims and objectives.

Evaluation of current provision:

- Evaluation practices of Nottinghamshire Fire and Rescue Service (NFRS)
- Evaluation practices of other UK fire and rescue services

NFRS Information Sharing Guidance

Community Needs Analysis:

- NFRS accidental dwelling fire incidents within the context of demographic trends across Nottinghamshire

Future work

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Project aims and objectives:

- To evaluate NFRS community safety activities with regards to risk reduction.

- To lead to the development of effective evaluation tools and methods, which will be embedded and maintained within the organisation.

- To analyse the needs of the community and forecast future demographic trends, creating an evidence base to help target specific prevention strategies.

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Evaluation practice of NFRS:

- Evaluation practices of NFRS schemes: The initial feedback which is collected from the schemes is positive, but on the whole little longitudinal analysis is carried out.

- Within NFRS there is no guidance regarding the evaluation process and consequently no consistent evaluation process.

- The ‘Safety Zone’ scheme is currently piloting more robust evaluation methods.

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The evaluation practices of other UK fire and rescue services:

- There is no nationally adopted evaluation process which takes place throughout UK fire and rescue services.
- Tyne and Wear Fire and Rescue Service (TWFRS) have implemented an evaluation toolkit which is used throughout their brigade.
- Greater Manchester Fire and Rescue Service (GMFRS) have implemented the SARA (Scan, Analyse, Response, Assess) method when carrying out their community safety initiatives.
- Derbyshire Fire and Rescue Service (DFRS) have an evaluation support officer, which has enabled evaluation strategies to be embedded and maintained within the organisation.

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Overall evaluation recommendations for NFRS:

- There is a need for the formalised sharing of working practice between throughout the community safety team.
- There is a need for the development of an evaluation toolkit, so that a standardised evaluation process is followed throughout the organisation.
- If effective and efficient evaluation is to take place then staff need to be clearly aware of their role within the evaluation process, and given the resources to be able to carry out the evaluation.
- The evaluation process should so be driven and regulated by strategic management and community safety delivery staff together.

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NFRS Information Sharing Guidance:

The reasons for developing information sharing guidance:

- Research carried out by cabinet office in 2007 identified that in some aspects of emergency response and planning the requirements of The Data Protection Act (1998) had been misinterpreted by local authorities.

- A risk analysis of my KTP project identified that an inability for NFRS to receive data from other public agencies could prevent effective evaluation from taking place.

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NFRS Information Sharing Guidance:

The Data Protection Act:

- The sharing of personal data without consent may interfere with the right to respect for privacy under the European Convention of Human Rights Act (ECHR) (1998) Article 8. However ECHR does provide lawful conditions for the collection and sharing of such data by public authorities in the interest of national security, public safety, the protection of health and the prevention of disorder.

- If ultimately the broad reason why information was collected in the first place and why it needs to be shared is to increase safety and reduce risk, then the reason for sharing is compatible with the reason it was processed for.

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Community needs analysis:

Objective: To asses the community's needs and perceptions in relation to risk prevention in order to predict the factors and issues which are likely to influence future service delivery.

This is being achieved through carrying out the following:

- Analysis of demographic trends
- Analysis of NFRS incident data
- Analysis of incident data from other public services in order to identify risk trends
- Administration of questionnaires and the conduction of focus groups in order to assess the community's perceptions of risk related issues within the community

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Accidental dwelling fires: Risk Factors

- The following slides will highlight a number of factors which could potentially increase the likelihood of an individual being involved in an accidental dwelling fire.

- They will be placed into context through assessing a number of demographic trends.

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NFRS Accidental Dwelling Fires: 2006 - 2011

District	Casualties			Incidents			Percentage of casualties from incidents
	Number	Overall %	Rank	Number	Overall %	Rank	
Area 1	66	8.6	5	292	8.8	2	22.6
Area 2	60	7.9	6	281	8.5	4	21.2
Area 3	71	9.3	3	288	8.7	3	24.7
Area 4	**354**	**46.3**	**1**	**1511**	**45.6**	**1**	**23.4**
Area 5	70	9.2	4	255	7.7	5	27.4
Area 6	77	10.1	2	236	7.1	7	32.6
Area 7	33	4.3	7/8	238	7.2	6	13.9
Area 8	33	4.3	7/8	215	6.5	8	15.3
Total	764	100.0	4	3316	100.0		23.0

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Demographic Trends:

Year	Population in Nottinghamshire							
	Area 1	**Area 2**	**Area 3**	**Area 4**	**Area 5**	**Area 6**	**Area 7**	**Area 8**
2005	114 600 (10.90%)	110 500 (10.51%)	109 500 (10.42%)	**286 200 (27.23%)**	112 200 (10.67%)	99 000 (9.42%)	110 500 (10.51%)	108 600 (10.33%)
2010	117 000 (10.75%)	111 800 (10.29%)	111 800 (10.29%)	**306 700 (28.22%)**	113 200 (10.42%)	99 600 (9.17%)	113 600 (10.45%)	112 800 (10.38%)

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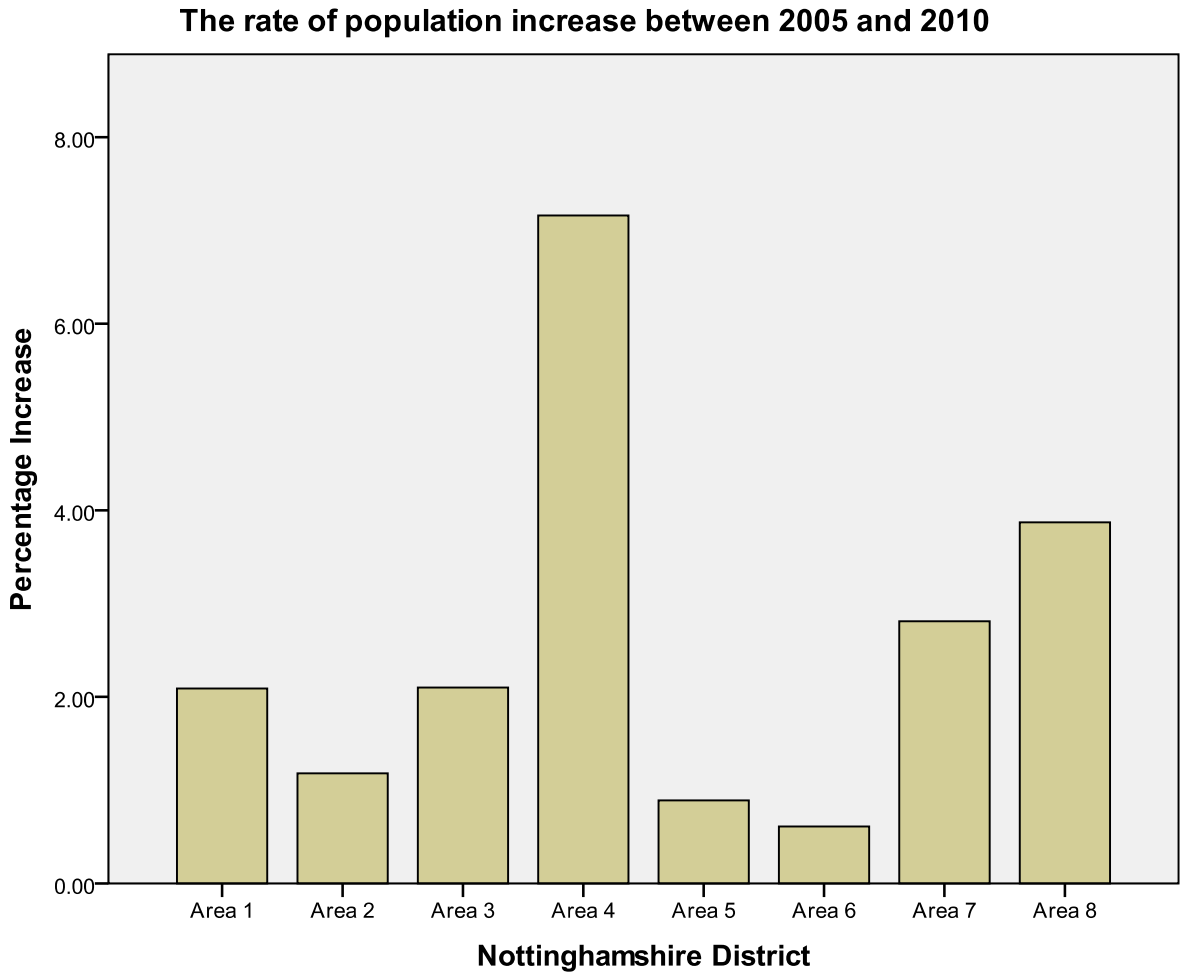
Demographic Trends:



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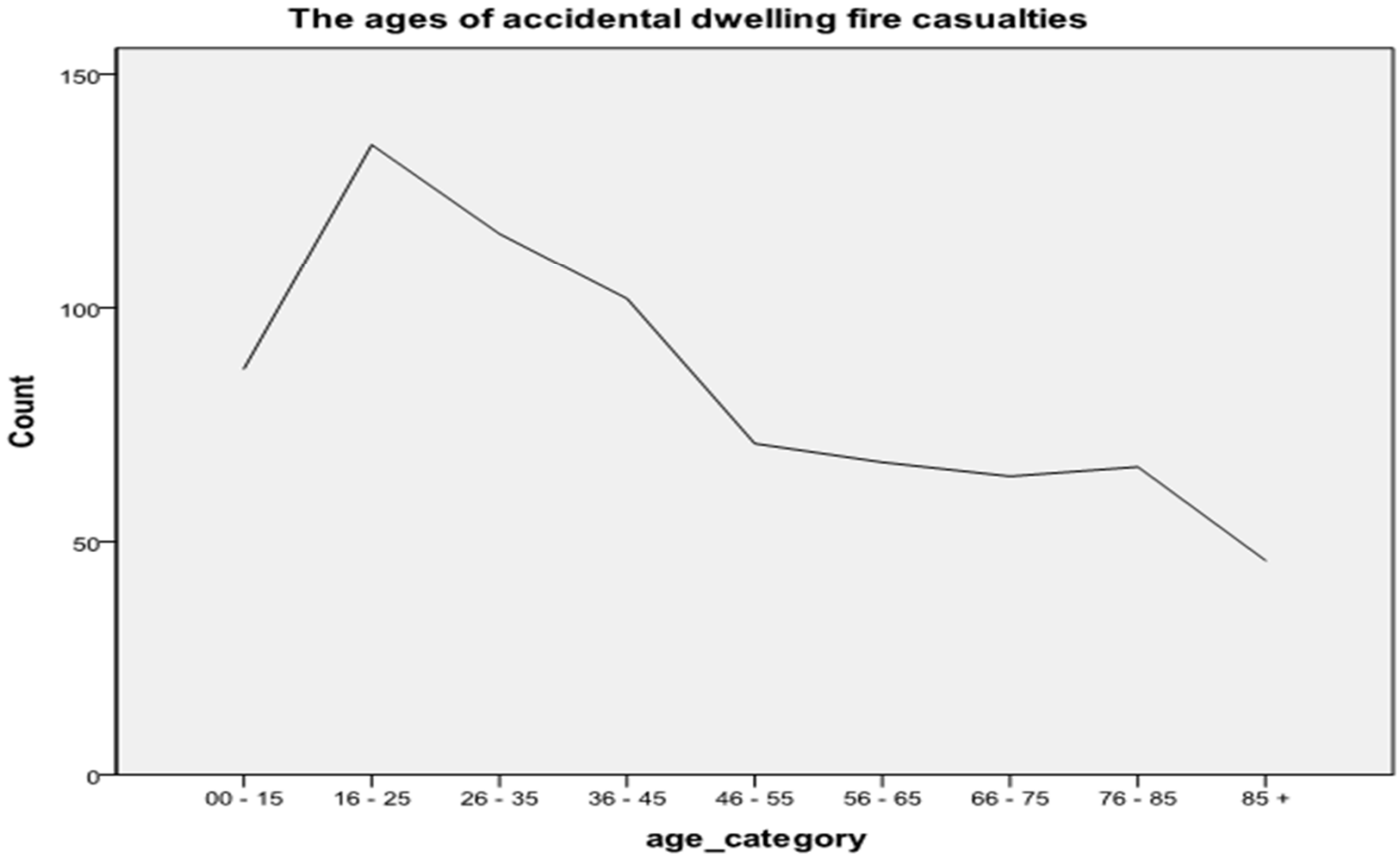
NFRS Accidental Dwelling Fires: 2006 - 2011



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NFRS Accidental Dwelling Fires: 2006 - 2011

Age Group	% of accidental dwelling fire casualties	% Nottinghamshire population
0	0.80	1.21
1 - 4	3.58	4.61
5 - 9	3.18	5.13
10 - 14	3.05	5.34
15 - 19	**7.29**	**6.64**
20 - 24	**9.15**	**8.65**
25 - 29	**7.60**	**7.37**
30 - 34	**7.82**	**6.08**
35 - 39	**6.76**	**6.45**
40 - 44	6.23	7.36
45 - 49	5.84	7.26
50 - 54	5.70	6.19
55 - 59	3.71	5.58
60 - 64	4.77	5.93
65 - 69	3.71	4.69
70 - 74	**4.64**	**3.86**
75 - 79	**3.71**	**3.17**
80 - 84	**5.44**	**2.33**
85 - 89	**4.11**	**1.47**
90+	**2.92**	**0.69**

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Demographic Trends: Nottinghamshire

Year	Population in Nottinghamshire				
	Aged 00 - 14	**Aged 15 - 24**	**Aged 25 - 44**	**Aged 45 - 64**	**Aged 65+**
2005	179 100 (17.04%)	160 000 (15.22%)	294 800 (28.05%)	251 800 (23.96%)	165 400 (15.74%)
2010	176 900 (16.28%)	166 200 (15.30%)	296 000 (27.24%)	271 400 (24.98%)	176 000 (16.20%)

	Population in Nottinghamshire				
	Aged 00 - 14	**Aged 15 - 24**	**Aged 25 - 44**	**Aged 45 - 64**	**Aged 65+**
Overall Change	Decrease of 2200	Increase of 6200	Increase of 1200	**Increase of 19 600**	**Increase of 10 600**
Overall Change %	1.23%	3.88%	0.41%	**7.78%**	**6.41%**

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Demographic Trends: Area 4 in Nottinghamshire

Year	Population in Area 4				
	Aged 00 - 14	**Aged 15 - 24**	**Aged 25 - 44**	**Aged 45 - 64**	**Aged 65+**
2005	45 900 (16.03%)	69 900 (24.41%)	83 400 (29.13%)	50 700 (17.71%)	36 400 (12.71%)
2010	47 300 (15.43%)	72 000 (23.48%)	96 100 (31.34%)	56 500 (18.43%)	34 700 (11.32%)

	Population in Area 4				
	Aged 00 - 14	**Aged 15 - 24**	**Aged 25 - 44**	**Aged 45 - 64**	**Aged 65+**
Overall Change	Increase of 1400	Increase of 2100	Increase of 12 700	Increase of 5800	Decrease of 1700
Overall Change %	3.05%	3.00%	15.23%	11.44%	4.67%

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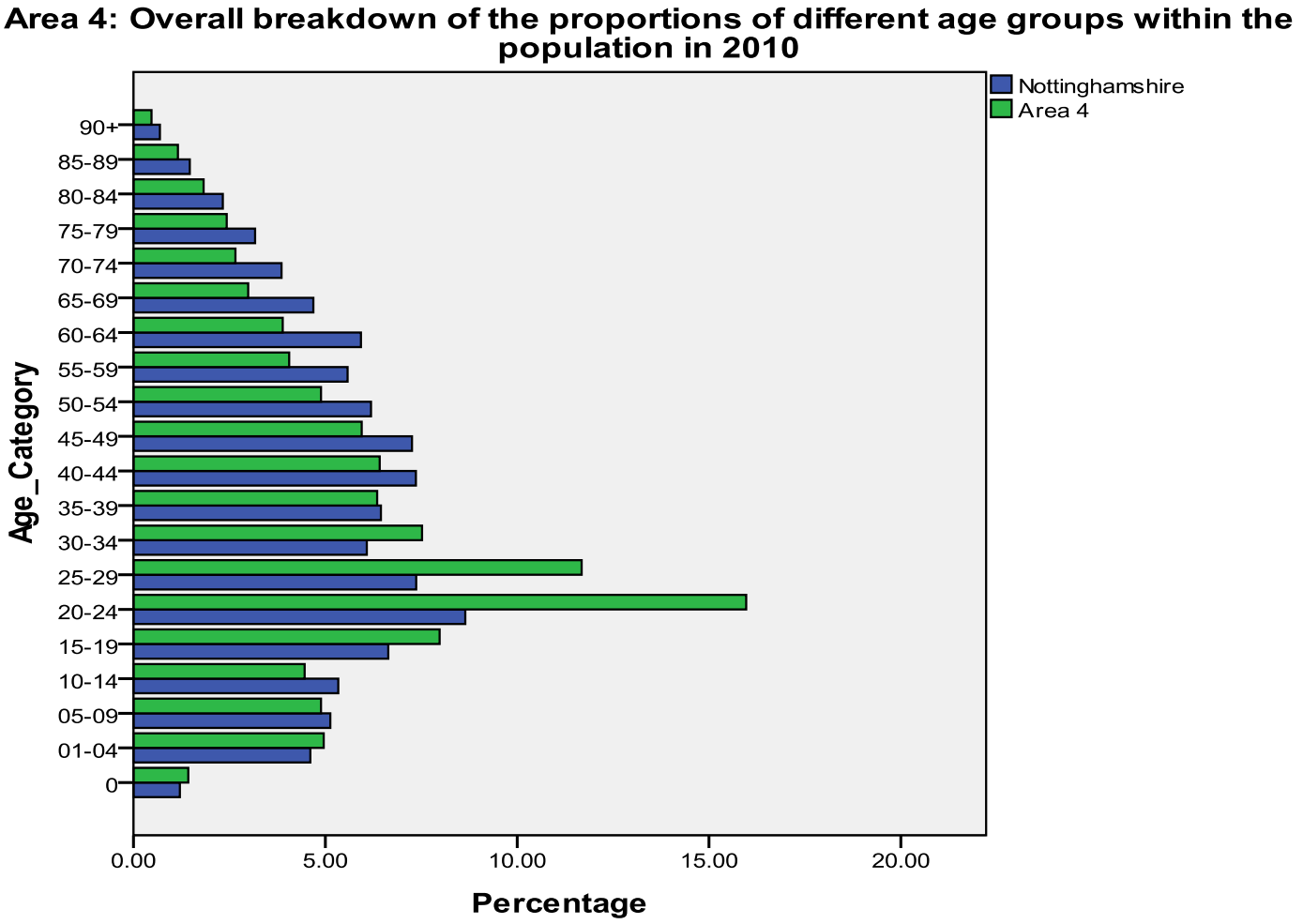
Demographic Trends: Area 4 in Nottinghamshire



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NFRS Accidental Dwelling Fires: 2009 - 2011

Occupancy Type	Casualties			Incidents		
	Number	Overall %	Rank	Number	Overall %	Rank
> 2 adults: no children	20	7.8	5	83	6.1	5
> 2 adults: with children	8	3.1	6	39	2.8	6
Couple: no children	43	16.7	3	215	15.7	3
Couple: with children	49	19.0	2	223	16.3	2
Lone parent	28	10.9	4	123	9.0	4
Lone person	**99**	**38.4**	**1**	**541**	**39.5**	**1**
Not Known	11	4.3	N/A	146	10.7	N/A
Total	258	100.0		3316	1370	

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Demographic Trends:

Area		1991	2001	% Increase
Nottinghamshire	**Number of lone person households**	101 325	129 648	27.95%
	Proportion of all households	25.5%	30.1%	
England and Wales	**Number of lone person households**	5,866,426	6,502,612	10.84%
	Proportion of all households	26.8%	30.0%	

Area		1991	2001	% Change
Nottinghamshire	**Number of lone person pensioner households**	57,808	60,531	Increase of 4.71%
	Proportion of all households	14.5%	14.1%	
	Proportion of lone person households	57.1%%	46.7%	
England and Wales	**Number of lone person pensioner households**	3,302,289	3,126,340	Decrease of 5.33%
	Proportion of all households	15.1%	14.4%	
	Proportion of lone person households	56.3%	48.1%	

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Why could the lone person be at more risk?

- A general consensus as to why people who live alone are more at risk is that there is nobody else to identify a hazard and raise the alarm, meaning that the fire is not as likely to be discovered as quickly (Holborn et al, 2003).

- I have carried out a literature review which puts forward the case to suggest that there may be additional factors which increase the risk of a lone person being involved in an incident.

- The review presents evidence to suggest that individuals who show high levels altruism are less likely to engage in risky behaviour and that people are more likely to demonstrate altruistic tendencies if they live with other people and have responsibility for the welfare of other people.

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Why could the lone person be at more risk?

Literature points to the following potential hypothesis:

1. People who have high levels of altruism are more likely to safety cautious and avoid risk taking (Machin & Sankey 2008; Ulleberg & Rundmo, 2003; Ulleberg, 2002; Lucidi et al, 2010).

2. People who have responsibility for or care for other individuals in their life are more likely to display altruistic behaviours in order to protect the welfare of these individuals (Maner and Galliot, 2007; . Andersson and Lindberg, 2009; Jones-Lee,1991; Ben-Ner and Kramer, 2011) .

3. People who have responsibility for others are more likely to be safety cautious and avoid risk taking . (Fleiter et al, 2010; Allareddy et al, 2007).

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NFRS Accidental Dwelling Fires/Nottinghamshire Demographic Trends:

- An accidental dwelling fire appears substantially more likely to occur within the area 4 in comparison to any other district within Nottinghamshire. The population in area 4 is increasing at a greater rate than any other district in Nottinghamshire.
- There appears to be a disproportionate risk of an accidental dwelling fire casualty occurring amongst the younger and older age groups, with risk appearing to decrease in middle age. The population is increasing at a faster rate amongst the older age groups in comparison to any other age group. However differences between districts need to be taken into consideration.
- The household occupancy group of ‘lone person’ appears to be substantially more likely to experience an accidental dwelling fire in comparison to any other household occupancy group.

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Future Work:

- Lay the foundations for the development of an evaluation toolkit, through administering evaluation workshops to train appropriate staff in questionnaire administration, focus group facilitation and data compilation techniques. This will involve the identification of the data which NFRS should be collecting from schemes and initiatives to enable effective evaluation.

- Continued detailed analysis of demographic trends as well as the data which NFRS, and other agencies, hold in order to develop a detailed risk profile of Nottinghamshire and formulate a definition of the community NFRS serve. This will lead to an evidence base to assist the future delivery of community safety initiatives.

- Administration of questionnaires and the conduction of focus groups in order to establish the community's needs and perception in relation to risk prevention.

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